The Bulletins are published weekly throughout the school year (thirty issues) to aid teachers and students in keeping abreast of geography behind current news events.

GEOGRAPHIC SCHOOL BULLETINS

of

The National Geographic Society

WASHINGTON 6, D. C.

The National Geographic Society is a non-profit educational and scientific society established for the increase of geographic knowledge and its popular diffusion.

VOLUME XXXII

April 5, 1954

NUMBER 25

1. Puerto Rico Prefers Star-Spangled Freedom
2. It's Cherryblossom Time in Washington
3. Georgia Multiplies Its Industries
4. Science Girds for June 30 Eclipse of Sun
5. More of Pompeii Comes to Light

Twin-barreled Cannon Didn't Work—Confederate relic on city hall lawn, Athens, Georgia (Bulletin No. 3), was designed to fire chained balls simultaneously and mow down Union forces like a scythe. One test was enough—the chain broke and the heavy missiles traveled wide of their mark.

NATIONAL GEOGRAPHIC PHOTOGRAPHER B. ANTHONY STEWART

The Popular Democratic Party, prime supporter of political and economic ties with the United States, has proved the dominant party through decision of the voters. The Independence Party, aiming at a complete break by constitutional means, has won only a small minority. The revolutionary Nationalist Party, responsible for recent terrorism in the United States Congress, polls almost no ballots.

Puerto Ricans may be headed toward more self-rule. Last November President Eisenhower offered to back "more complete or absolute independence" if the Puerto Rican legislature asks for it.

Several aspects of relations with the United States now are being studied. Puerto Rico has no vote in the United States Congress, which can enact draft laws and other legislation vitally affecting internal affairs of the commonwealth. The island, rich in sugar, tobacco, coffee, and fruit, may not negotiate its own trade treaties.

Whatever remains for future action, great progress toward self-rule has been made since the United States took over in 1898, more than 400 years after Columbus discovered the island. Until recent years the President appointed the Governor, heads of the executive departments, and members of one house of the Legislative Assembly.

By 1948 the executive and legislative branches were already in the hands of elected officials. That year an island referendum overwhelmingly favored a commonwealth associated with the United States rather than American Statehood or complete independence.

A constitution modeled after that of the United States and embodying a bill of rights was approved by Congress and by the Puerto Rican people in 1952.

Appoints Department Heads—Under it, executive authority rests in a Governor, who selects the heads of eight executive departments: state, justice, education, health, treasury, labor, agriculture, and commerce-public works. The Governor also appoints the judges of the island's Supreme Court and the lower tribunals.

Like its United States counterpart, Puerto Rico's Legislative Assembly consists of a Senate and a House of Representatives. All legislators are elected by direct vote and meet every January in San Juan, the capital. Men and women 21 and over qualify to vote.

Puerto Rico enjoys tariff-free trade relations with the United States. Its people are United States citizens and, if residents of this country, may vote in United States elections. They may also migrate freely to the mainland. New York City, 1,750 miles away, now has 450,000 Puerto Ricans, twice the population of San Juan proper.

References—Puerto Rico is shown on the National Geographic Society's new map of the West Indies on which it appears in a large-scale inset. Write the Society's headquarters, Washington 6, D. C., for a price list of maps.

For further information, see in *The National Geographic Magazine*, April, 1951, "Growing Pains Beset Puerto Rico"; and "Puerto Rico: Watchdog of the Caribbean," December, 1939 (out of print; refer to your library). *(Issues of The Magazine 12 months old or less are available to schools and libraries at a specially discounted price of 50¢ a copy. Earlier issues are 65¢ a copy through 1946; $1.00, 1930-1945; $2.00, 1912-1929. Write for prices of issues prior to 1912.)*

See also, in the GEOGRAPHIC SCHOOL BULLETINS, March 30, 1953, "Puerto Rico Struggles to Make More Jobs"; and "Puerto Rico Makes Progress in Many Fields," April 23, 1951.

UMI

HAMILTON WRIGHT

Shrine of Puerto Ricans' Devotion—El Morro's thick walls defied Sir Francis Drake in 1595. They jut into Atlantic surf at the headland of the small coastal island containing San Juan, the commonwealth's capital and largest city.

Bulletin No. 1, April 5, 1954

Puerto Rico Prefers Star-Spangled Freedom

Fly for four hours southeastward from Miami, Florida, over the island-strewn ocean. Nearly 1,000 miles from the continental shore you will reach San Juan, a teeming metropolitan area of the United States.

San Juan is capital of Puerto Rico, a 3,435-square-mile West Indies island. Barely two thirds as large as Connecticut, the island holds some 2,200,000 people—more than live in the populous Nutmeg State.

Wants U. S. Ties—Puerto Rico stands today as an example to the world of a commonwealth that has won a large measure of self-government but still spurns complete independence from a powerful neighbor. Its recent history shows that it has not achieved full independence from the United States because it does not want it.

ENTERED AS SECOND CLASS MATTER APRIL 27, 1943, POST OFFICE, WASHINGTON, D. C., UNDER ACT OF MARCH 3, 1879.
COPYRIGHT, 1954, BY THE NATIONAL GEOGRAPHIC SOCIETY. INTERNATIONAL COPYRIGHT SECURED. ALL RIGHTS RESERVED.
SUBSCRIPTIONS SEVENTY-FIVE CENTS FOR THIRTY WEEKLY ISSUES DURING THE SCHOOL YEAR.

These proved acceptable. On March 27, 1912, Mrs. William Howard Taft, wife of the President, planted the first cherry tree of the collection that would make a lacy pink and white frame for the Tidal Basin.

Just 40 years later, in the spring of 1952, the United States had a chance to repay in kind Japan's early goodwill gesture. On learning that Tokyo's decorative cherry trees had suffered from lack of care (some had been hacked down for badly needed firewood) during the war years, the Department of Interior airmailed the city several dozen cuttings from the Washington show varieties. These have been used to rejuvenate the grove from which the original gift came.

The Japanese mayor who figured in the original presentation, Mr. Yukio Ozaki, is still alive. At the age of 91, he visited Washington in 1950, promising to return to see the blooms again in 1959 when he will be 100.

Mr. Ozaki has remained a friend of the United States through the years, opposing the Japanese militarism that led to the Pacific war. He was born only six years after Commodore Perry visited his homeland.

References—For additional information, see "The Yankee Sailor Who Opened Japan," in *The National Geographic Magazine*, July, 1953.

"Loveliest of trees, the cherry now / Is hung with bloom along the bough,
And stands about the woodland ride / Wearing white for Eastertide."—A. E. Housman

WALTER MEAYERS EDWARDS, NATIONAL GEOGRAPHIC STAFF

Bulletin No. 2, April 5, 1954

It's Cherryblossom Time in Washington

It's Japanese cherryblossom time in the Nation's capital. The pale pink, frosty white, and deep rose blooms beside the Potomac have just finished playing their accustomed role in the annual pageants, parades, and parties built around them. Now they proudly await the remainder of their half-million admirers.

Most tourists—many school groups among them—come to springtime Washington with the simple nature-lover's point of view once expressed by A. E. Housman in a poem about English flowering trees:

About the woodlands I will go
To see the cherry hung with snow.

But many seek deeper meanings. For them, the festival committee this year staged a ceremonial sundown lighting of a Japanese gift lantern. Not the crepe-paper lantern of lawn parties, this ten-ton structure from a Tokyo temple is a solid reminder of the historic relationship between Japan and the United States.

July 14 last year marked the 100th anniversary of the opening of Japan to the outside world by Commodore Matthew C. Perry of the United States Navy. Among the practical and illuminating presents that Perry brought to the Emperor were a telegraph instrument, a telescope, clocks, firearms, farm tools, and a miniature railway.

Old Versus New—Japan took the hint, and in the next half century amazed the world with her swift adoption of modern mechanization and methods.

In 1912, however, when the Japanese government made a return gift to the United States capital of several thousand cherry trees, the presentation was a symbol of the old Japan of flower festivals and stylized scenic effects.

Prior to 1912 there were few Japanese cherry trees in the United States, though it was known that they would thrive here.

Dr. David Fairchild, world-renowned plant explorer for the Department of Agriculture, and Trustee of the National Geographic Society since 1905, had imported numerous varieties in the early 1900's, and had successfully grown them on his estate outside Washington.

From these came the idea for the miles of plantings in the capital's Potomac Park that now attract visitors from all over the country. For Dr. Fairchild's flowering orientals were seen and admired by Miss Eliza Scidmore, a writer long interested in Japan's history and culture.

Through her efforts, the mayor of Tokyo arranged to have some 3,000 shoots from the Japanese capital's famous riverside front sent to Washington. They were an expression of Japan's good will and appreciation for American aid in concluding the Russo-Japanese War of 1904-5.

Second Shipment Necessary—Unfortunately, the shipment was found on arrival to be infested with insect pests and disease, and had to be destroyed. Refusing to take offense, Tokyo's mayor forwarded a second gift batch of cuttings, carefully propagated to be free of disease.

as the nearest city to South Carolina's busy Savannah River Plant of the Atomic Energy Commission.

First explored in 1540 by Hernando de Soto, Georgia waited for Menéndez de Avilés to land on St. Catherines Island and claim the land for Spain in 1566, thus establishing the region's first European settlement. Here, two years later, Spanish missionaries compiled the first book in what is now the United States.

The Spaniards later withdrew to Florida. Not until the arrival of General James Oglethorpe with some 120 pioneers in 1733 did settlement begin in earnest. Though Georgia was the last of the thirteen colonies to be settled, it was the fourth to join the Union (January 2, 1788).

The first steamship to cross the Atlantic—the *Savannah*—proudly bore the name of this important new-world port on her historic voyage in 1819. The first degree granted by a women's institution was given in 1840 by the Georgia Female College—now Wesleyan College, in Macon.

References—Georgia is shown on the Society's map of the Southeastern United States.

See also "The Greener Fields of Georgia," in *The National Geographic Magazine*, March, 1954; "Skyline Trail from Maine to Georgia," August, 1949; "Dixie Spins the Wheel of Industry," March, 1949; "The Okefinokee Wilderness," May, 1934; "The Golden Isles of Guale," February, 1934; and "Marching Through Georgia Sixty Years After," September, 1926 (out of print; refer to your library).

Cartersville Women Enjoy Their Work—Textiles are Georgia's primary industry. In this tufted-textile plant skilful operators apply designs in making candlewick bedspreads. Using colored yarns from overhead spools fed to electrically operated punch needles, they work with machine-gun rapidity.

NATIONAL GEOGRAPHIC PHOTOGRAPHER B. ANTHONY STEWART

UMI

Bulletin No. 3, April 5, 1954

Georgia Multiplies Its Industries

Gone with the Wind sprang to life in headlines from 100 miles south of Atlanta in mid-March when tornadoes severely damaged western Georgia towns. Striking in the same general area they had visited less than a year earlier, they tossed big transport planes about at Lawson Air Force Base near Columbus.

Ill winds, they blew little good. But in damaging busy communities they did serve to show that Georgia today is an inspired State, its agriculture and industry booming.

Peaches, Cotton—Georgia, to many minds, suggests peach orchards, cotton fields, and leisurely living on plantations. Peaches and cotton continue to grace the Georgia landscape, but their importance diminishes as newer crops and industries gain.

Georgia orchards still yield three to four million bushels a year. Its automobile license plates carry the legend, "Peach State." But in terms of bushels, the title belongs to California.

Long second in cotton output, Georgia now ranks no better than sixth, although cotton is raised in virtually every county and the annual production of three quarters of a million bales remains the State's chief cash crop. Textile manufacture, with cotton as its base, is Georgia's largest industry.

Georgia has its share of firsts. Its farms lead the Nation in producing broiler chickens, watermelons, peanuts, pecans, and pimientos. Farms cover nearly two thirds of the state. Greatly improved pastures replacing worn-out cotton fields in many sections make beef production a rising star. Enlightened farmers have learned the marvel of fertilizers, electricity, and mechanical equipment.

As industry advances, pulp and paper mills now flourish in the land where Eli Whitney developed his cotton gin. Great new plants manufacture chemicals, plastics, synthetic fabrics, and airplanes.

South's Empire State—Georgia, largest State east of the Mississippi, is only slightly smaller than all New England with its six States. Atlanta, capital and largest city, holds 430,000 of the 3,500,000 residents of the State. Mountains rise to a top of 4,784 feet in the north; a wide plateau crosses the center; a coastal plain reaches inland in the south. Islands dot the full length of its Atlantic shore.

Georgia's marble is well known, as is also its shrimp yield. In a Savannah factory, from 12,000,000 to 15,000,000 pounds of shrimp annually are cleaned, dipped in batter, and frozen—ready for the frying pan.

More than 1,000,000 baseball bats are made each year at one Georgia factory. Players and spectators all over the world refresh themselves with a Georgia-born beverage—Coca-Cola.

Near Warm Springs, the Franklin D. Roosevelt State Park has been set aside in honor of the former President. Not far away, near Columbus, sprawls Fort Benning, the Nation's largest infantry school. Some 50,000 students a year attend classes and undergo training here.

South of Macon lies the big Robins Air Force Base. Augusta booms

proved unsuccessful. In each case the sun was well above the horizon, and sky glare proved too great. The suggestion of a study of zodiacal light with both moon and earth barely hiding the sun came from Naval Research Laboratory scientist E. O. Hulburt, a member of the National Geographic Society's 1947 Brazil eclipse team.

To prepare for their few moments of presunrise, the astronomers will arrive "on location" at their Colorado-Nebraska corner two weeks before the event.

A dozen or more United States Government agencies, universities, and institutions will co-operate in a very comprehensive study of the 1954 eclipse. Their scientists will man observation sites scattered along the eclipse path. The program is co-ordinated by Air Force technicians.

It will renew many of the projects of "Operation Eclipse: 1948." The National Geographic Society's Research Committee directed that multiple study, stationing teams along the eclipse path in Burma, Thailand, China, Korea, Japan, and the Aleutians.

An outstanding project then was to make measurements by which the basic map grids of Asia and North America could eventually be tied together more accurately. The coming eclipse offers a new opportunity for improving maps and navigational techniques—this time between North America and Europe. It is done by recording the split-second timing of the first and last apparent contacts of the sun and moon disks at points along the path of the eclipse.

Van Biesbroeck at Khartoum—The Yerkes Observatory astronomer has observed sun eclipses for The Society in Brazil in 1947, Korea in 1948, Sudan in 1952. He will lead a presunrise study of zodiacal light during the June 30 sun eclipse.

W. ROBERT MOORE, NATIONAL GEOGRAPHIC STAFF

References—The path of the June 30 eclipse may be traced on the Society's World Map.

See also "South in the Sudan," in *The National Geographic Magazine*, February, 1953; "Operation Eclipse: 1948," March, 1949; "Eclipse Hunting in Brazil's Ranchland," September, 1947; and, in the GEOGRAPHIC SCHOOL BULLETINS, March 31, 1952, "African Eclipse Provides Scientific Clues."

Bulletin No. 4, April 5, 1954

Science Girds for June 30 Eclipse of Sun

Scientists on three continents—North America, Europe, and Asia—will have a busy day on June 30. Already they are laying plans and marshaling equipment for the big event—a total eclipse of the sun.

The moon will not hide the sun again along the same approximate arc of the Northern Hemisphere for nearly two centuries. So physicists and astronomers will make the most of 1954's sky pageant.

The Shadow Strikes—Basking in constant sunlight, the sun's satellite earth and the earth's satellite moon each cast a long conical shadow in space, pointing away from the sun. When the earth comes directly between sun and moon, as it did last January 18, the earth shadow strikes the smaller body, completely darkening it.

When the moon comes directly between sun and earth, it is far too small to hide the entire earth in its shadow. But it sometimes completely hides the sun from a tiny part of the earth.

That will happen June 30. The sun rising on Nebraska will be completely obscured by the moon in an area 80 miles in diameter near the center of the State. And because the rising sun appears to gain slowly on the moon in their westward course across the sky, that 80-mile-wide shadow of the moon will move in the opposite direction. Its path will lie northeastward across Minnesota, Wisconsin, Michigan, and southeastern Canada. It will race along at a speed of 3,000 miles an hour.

Crossing the Atlantic, the shadow of total eclipse will touch Greenland, Iceland, southern Norway, and Sweden. Arcing southeastward, it will visit Russia, Iran, and Afghanistan. Less than three hours after blacking out the rising sun in Nebraska it will eclipse the setting sun of Pakistan.

Science Before Sunrise—The first scientists to meet their zero hour on June 30 will not even wait for the sun to rise. They will be astronomers George Van Biesbroeck, Aden B. Meinel, and aides from the University of Chicago's Yerkes Observatory working on a project sponsored by the National Geographic Society.

From three points in close range at the very northeastern corner of Colorado they will look for the phenomenon known as zodiacal light. Their observations will be the first of the kind ever made in the moments when the sun is totally eclipsed by the moon while still just below the observers' eastern horizon.

Greater knowledge has long been sought concerning this unusual light—a faint hazy band which extends upward from the sun. It extends downward also, but it is rarely so observed, since it is seen most easily before sunrise and after sunset. The astronomers will make horizontal sweeps along the horizon with fast photoelectric scanners in an attempt to distinguish the zodiacal light from the dawn.

In tropical regions zodiacal light has been seen to extend clear across the sky. It was named in 1683 by Jean Dominique Cassini, a French astronomer who observed that it stayed within the zodiacal path of the sun.

Efforts to photograph the light during sun eclipses in 1937 and 1952

they have been left in their original positions, and Pompeii has developed into one of Italy's greatest attractions.

Visitors may walk through houses where contemporaries of Caesar and Cicero lived and stroll along the paved streets they trod. Olives and walnuts, and loaves of bread, now charcoal but recognizable by their shape, reveal menus of these citizens of ancient Pompeii.

Vesuvius still casts a constant shadow over the restored city and the modern town that has risen beside it. White wisps of smoke drift from the crater and archeologists fear the volcano may one day undo their painstaking work.

MELVILLE BELL GROSVENOR

Visitors View a Page from Ancient History—Pompeian frescoes emerge from centuries of darkness to illustrate life in a bygone era. Glass protects them from the elements.

Although Vesuvius has erupted at intervals through the years, farmers still tend vineyards on its fertile slopes. The most disastrous explosion of modern times occurred in April, 1906, and an eruption causing considerable damage took place in 1944. Allied soldiers then occupying the region helped villagers escape. But no Vesuvian action of modern times has been comparable to the destruction of Pompeii, A. D. 79.

References—Pompeii may be located on the Society's map of Central Europe. See also, "Italy Smiles Again," in *The National Geographic Magazine*, June, 1949; "Ancient Rome Brought to Life" and "The Roman Way," November, 1946; "Behind the Lines in Italy," July, 1944; "Italy, From Roman Ruins to Radio," March, 1940; and, in the GEOGRAPHIC SCHOOL BULLETINS, February 2, 1953, "Solfatara Is Harmless Neighbor of Vesuvius"; and "Pompeii Continues to Yield Secrets," December 11, 1950.

IS YOUR CLASSROOM WELL SUPPLIED WITH MAPS—

the modern, visual medium for interpreting history and keeping abreast of the times? The Society's 10-color wall maps cost only 50¢ on paper; $1.00 on fabric. Send for publication order list.

UMI

Bulletin No. 5, April 5, 1954

More of Pompeii Comes to Light

With every stroke of pickax and spade, archeologists are throwing new light on ancient Roman ways of life. Digging at the ruins of Pompeii, they have worked for two full centuries to uncover little more than half of the famous buried city.

Block by block, the ancient Italian metropolis is being cleared of the 20-foot-thick layer of volcanic ash and stone that entombed it, A. D. 79. An army of 1,000 workers has restored hundreds of private homes, shops, temples, theaters, and public baths. Damage by man-made explosions during World War II has been repaired, along with some of the devastation wrought by nature long ago.

The Italian government estimates it will take at least another 75 years to complete excavation of the 145-acre town.

Cicero Lived Near by—At the time of its burial, Pompeii was six centuries old. It was a flourishing commercial center with a population of more than 20,000. As a fashionable resort on the coast south of Naples, it was popular with wealthy Romans. One of Cicero's numerous villas stood at the foot of near-by Mount Vesuvius.

A. D. 63 an earthquake shook Pompeii to its foundations. Scarcely a building remained undamaged. The Roman Senate, afraid of further quakes, at first refused to appropriate funds to restore it. But the legislators soon relented and voted money for a new, even more luxurious city on the site.

Sixteen years later, on a hot August morning, the final calamity struck. With a terrifying roar, Vesuvius erupted an enormous cloud of flame and smoke. Boiling lava flowed down the mountain's shuddering side. A black blanket of ash enveloped Pompeii.

Trapped in their homes, shops, and offices, hundreds of Pompeians were smothered by poisonous gases. Others dashed into the streets and were killed by falling rocks. Many were crushed to death as panic-stricken mobs rushed the eight gates leading out of the walled city.

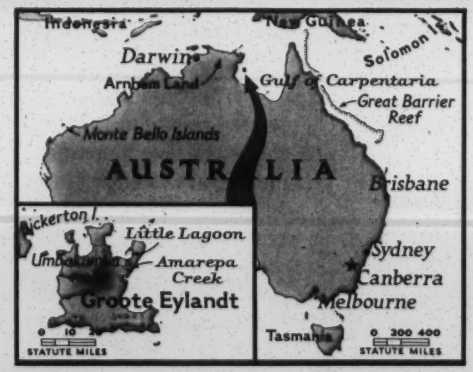
When the skies cleared and Vesuvius calmed down, a few days later, survivors returned to search for the 2,000 victims. Attempts to dig out the buried town were soon abandoned. Later volcanic eruptions piled up new layers of ash and earth. The last traces of Pompeii disappeared as vines and trees eventually grew in the new earth.

Discovered by Accident—Fifteen centuries passed. Then, in 1594, workmen laying a water conduit stumbled onto the ruins. The blanket of ash that destroyed Pompeii had also preserved it.

Works of art and science and objects of everyday life were discovered miraculously intact. Casual search revealed a number of rare objects; a few ruins were uncovered and left exposed or covered again, but no start was made at systematic exploration. It was not until 1748 that organized excavation was begun, due to the interest of Charles III of Naples.

Treasures found in the ruins were at first removed to the Naples National Museum or sold to private collectors. In recent years, however,

HOWELL WALKER, NATIONAL GEOGRAPHIC STAFF



Australian Aborigines Answer Roll Call

Members of the National Geographic 1948 Expedition to Arnhem Land visited Groote Eylandt. At Umbakumba they found 150 natives, nomadic by nature, happily settled in a farming community founded by Fred Gray, an Englishman (at window).

The 1948 leader, Charles P. Mountford, Australian anthropologist, heads a new National Geographic-sponsored group now studying aborigines on Melville Island, the spot on the map just north of Darwin.